

CLAIMS

1. A bipolar electrostatic chuck, comprising:

a chuck main body having a mounting surface;

an annular electrode member which is formed in an annular configuration with a center opening and is fixed onto the mounting surface of the chuck main body through an adhesive layer;

an inner electrode member which is disposed at a given clearance from the annular electrode member within the center opening of the annular electrode member and is fixed onto the mounting surface through the adhesive layer; and

an outer electrode member which is disposed at a given clearance from the annular electrode member outside of the annular electrode member and is fixed onto the mounting surface through the adhesive layer,

wherein the inner electrode member and the outer electrode member constitute a first electrode, and the annular electrode member constitutes a second electrode.

2. The bipolar electrostatic chuck according to claim 1, wherein the chuck main body constitutes the first electrode together with the inner electrode member and the outer electrode member.

3. The bipolar electrostatic chuck according to claim 1 or 2, wherein the mounting surface of the chuck main body has an outer convex portion for positioning the outer electrode member in a heightwise direction with respect to the mounting surface and/or an inner convex portion for positioning the inner electrode member in the heightwise direction with respect to the mounting surface.

4. The bipolar electrostatic chuck according to claim 1 or 2, wherein positioning pins that position the inner electrode member, the annular electrode member, and the outer electrode member in a horizontal direction with respect to the mounting surface are disposed between the chuck main body, and the inner electrode member, the annular electrode member, and the outer electrode member which are fixed onto the mounting surface of the chuck main body through the adhesive layer, respectively.

5. The bipolar electrostatic chuck according to claim 1 or 2, wherein at least one of the inner electrode member, the annular electrode member, and the outer electrode member which are fixed onto the mounting surface of the chuck main body through the adhesive layer is fixed onto the mounting surface of the chuck main body in a complementary configuration

with each other.

6. The bipolar electrostatic chuck according to claim 1 or 2, wherein the chuck main body and the annular electrode member have interposed therebetween a positioning spacer for positing the annular electrode member in the heighthwise direction with respect to the mounting surface.

7. The bipolar electrostatic chuck according to claim 1 or 2, wherein the inner electrode member, the annular electrode member, and the outer electrode member are made of pure aluminum.

8. The bipolar electrostatic chuck according to claim 1 or 2, wherein the adhesive layer is made of one or two materials selected from silicone-based adhesive agent and polyvinyl butyral adhesive agent.

9. The bipolar electrostatic chuck according to claim 8, wherein the silicone-based adhesive agent is a gel adhesive agent or an elastomer-based adhesive agent.